



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/696,137	10/30/2003	William D. Hunter	03759	5536

7590 04/23/2004  
Edward L. Brown, Jr.  
Suite 1100  
125 N. Market  
Wichita, KS 67202

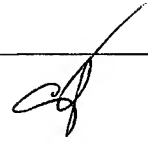
EXAMINER

NOVOSAD, CHRISTOPHER J

ART UNIT	PAPER NUMBER
3671	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/696,137	<b>Applicant(s)</b> HUNTER ET AL. 	
	<b>Examiner</b> Christopher J. Novosad	<b>Art Unit</b> 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/30/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

Art Unit: 3671

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Walgren.

With respect to claim 1, Walgren shows a removable tooth 31 (Fig. 2) having leading and trailing ends (unnumbered) utilized on a linear movement endless trencher chain 9,17-19:

a planar mounting portion 11A (Fig. 2) that attaches to the chain 9, 17-19 and lies in a plane of movement (unnumbered) of the trencher chain 9,17-19;

a cutting portion 35 having a straight cutting edge 35 at the leading end (unnumbered) of the tooth 31 positioned substantially normal to the direction of movement *T* of the chain 9,17-19, the cutting portion 35 being aligned from the mounting portion 11A at an acute angle *B* to the plane (unnumbered) of the mounting portion 11A and having convex surfaces (unnumbered) on both sides (unnumbered) of the cutting portion 35 and;

a junction line 42 between the mounting portion 11A and the cutting portion 35 which forms an acute angle with the direction of movement *T* of the chain 9,17-19, whereby the cuttings produced by the tooth 31 are lifted away from the chain 9,17-19 as the chain 9,17-19 is digging.

With respect to claim 2, the cutting edge 35 of the tooth 31 has a constant bevel (unnumbered) along its length of between 45 degrees and 60 degrees.

Art Unit: 3671

As to claim 3, the tooth 31 can be used on opposite outer sides of the trencher chain 9,17-19.

Regarding claim 5, a planar top edge 33 slopes upward from the trailing end (unnumbered) that joins the leading end (unnumbered) of the tooth 31 at an acute angle (unnumbered) forming a breaking point for fracturing the soil.

With respect to claim 6, the cutting edge 35 is positioned at an acute angle *B* with the direction of movement *T* of the trencher chain 9,17-19 and the outer end (unnumbered) of the cutting edge 35 forms a breaking point (unnumbered) for fracturing the soil.

As to claim 7, Walgen shows a removable trenching tooth 31 (Fig. 2) having leading and trailing ends (unnumbered) utilized on a linear movement endless trencher chain 9,17-19:

a planar mounting portion 11A that attaches to the chain 9,17-19 and lies in a plane of movement (unnumbered) of the trencher chain 9,17-19;

a cutting portion 35 having a straight cutting edge 35 at the leading end (unnumbered) of the tooth 31 positioned substantially normal to the direction of movement *T* of the chain 9,17-19, the cutting portion 35 being aligned from the mounting portion 11A at an acute angle *B* to the plane (unnumbered) of the mounting portion 11A, and;

a junction line 42 between the mounting portion 11A and the cutting portion 35 which forms an acute angle *A* with the direction of movement of the chain 9,17-19,

whereby the cuttings produced by the tooth 31 are lifted away from the chain 9,17-19 as the chain 9,17-19 is digging.

Art Unit: 3671

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walgren in view of.

Walgren shows the tooth as noted above.

Claim 4 distinguishes over Walgren in requiring the tooth to be formed by any one of the methods of casting, forging, molding or machining.

Hemphill discloses "making a...tooth 10...by casting or forging" in col. 6, lines 43-45 for strength.

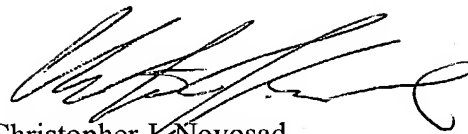
It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed the tooth 31 of Walgren by casting or forging as disclosed in Hemphill for the reason noted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher J. Novosad whose telephone number is 703-308-2246. The examiner can normally be reached on Monday-Thursday 5:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Will can be reached at 703-308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3671

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christopher J. Novosad  
Primary Examiner  
Art Unit 3671

April 19, 2004